# Quick Start Guide

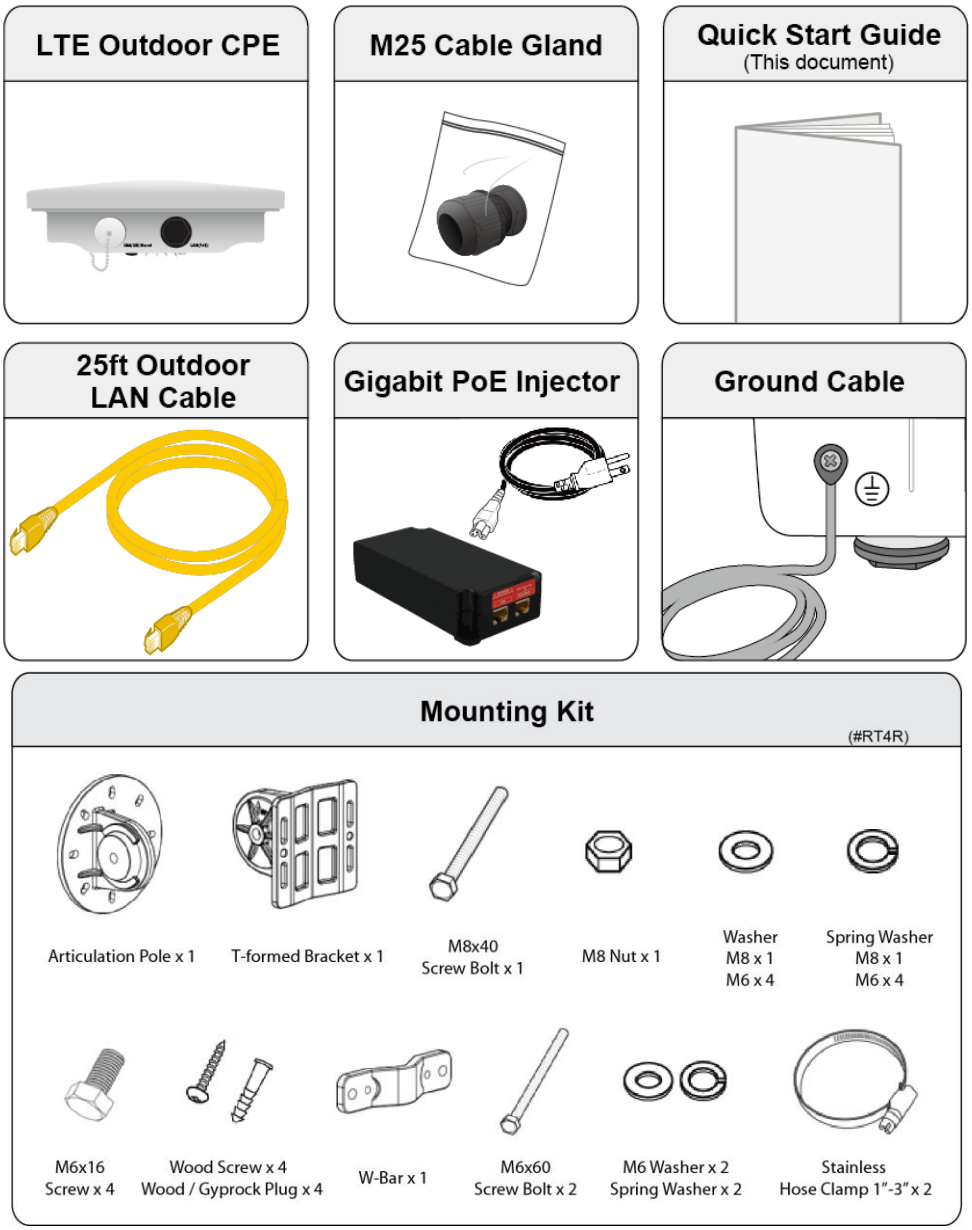
# RidgeWave® BEC 7000

## 4G/LTE-Advanced Pro Outdoor Router

- **PLEASE READ THE QUICK START GUIDE AND FOLLOW THE STEPS CAREFULLY. THIS QUICK START GUIDE WILL HELP YOU INSTALL THE DEVICE PROPERLY AND AVOID IMPROPER USAGE. IF YOU NEED MORE INFORMATION ON THIS SOFTWARE CONFIGURATION, PLEASE REFER TO THE USER MANUAL.**
- **INDUSTRIAL SIM IS RECOMMEND!**

## Package Contents

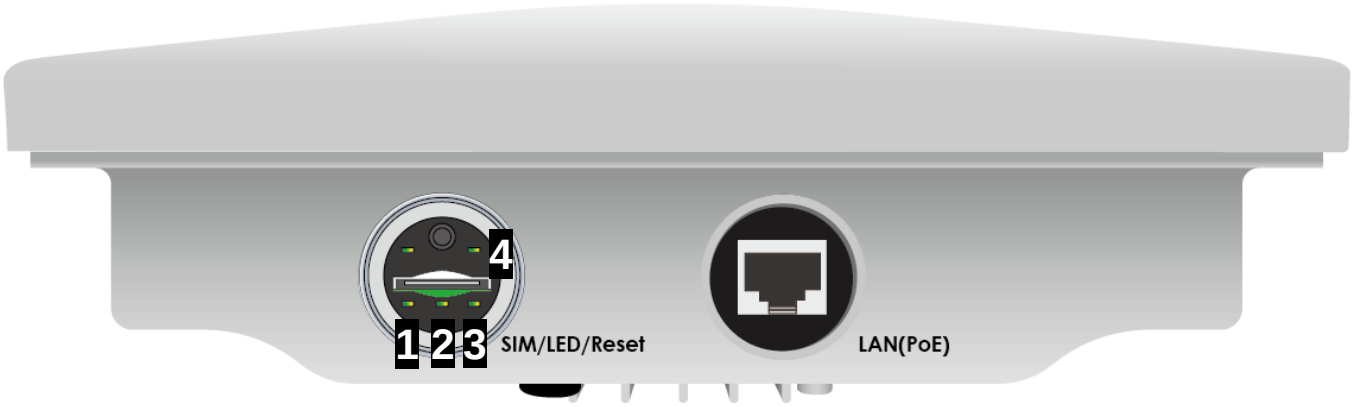
- ✓ **BEC 4G/LTE Outdoor Router (ODU)**
- ✓ **M25 Cable Gland**
- ✓ **This Quick Installation Guide**
- ✓ **Outdoor LAN Cable**
- ✓ **Gigabit Power-over-Ethernet (PoE) Injector**
- ✓ **Grounding Cable**
- ✓ **Mounting Kit**




**Attention**

- **Do not remove, open, or repair the case yourself. Contact with your Internet Service Provider or have it repaired at a qualified service center.**
- **Use the supplied PoE (Power-over-Ethernet) injector for indoor only or with any 802.3at capable PoE injectors to connect to the device.**
- **It is mandatory to earth ground the device. Improper grounding not only could damage the unit but also all equipment connected to it.**

# Hardware Overview



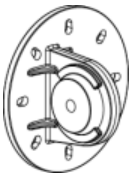

| CONNECTORS | DESCRIPTION |
|---|---|
| **SIM / LED / Reset** | Insert the SIM card into the SIM slot.<br>Press the reset button to reset device or restore to factory default settings |
| **Gigabit LAN(PoE)** | Connect the supplied PoE injector, 802.3at compliant, using an Ethernet cable. |

| LED | STATUS | DESCRIPTION |
|---|---|---|
| **1. Power** | Orange | System is either in initial startup phase or has boot failure |
| | Green | System is up and ready |
| | Off | No input power |
| **2. LAN(PoE)** | Orange | Transmission speed is at 10/100Mbps |
| | Green | Transmission speed is at gigabit speed (1000Mbps) |
| | Blinking | Data being transmitted/received |
| | Off | No device is being connected |
| **3. Internet** | Orange | IP request failed or system is in initial booting phase |
| | Green | IP connected and traffic is passing thru the device |
| **4. 4G/LTE Signal Strength** | Green | RSSI greater than -69 dBm. Excellent signal condition |
| | Green Flashing quickly | RSSI from -81 to -69 dBm. Good signal condition |
| | Orange Flashing quickly | RSSI from -99 to -81 dBm. Fair signal condition |
| | Orange Flashing slowly | RSSI less than -99 dBm. Poor signal condition |
| | Orange | No signal. 4G/LTE module is still in connected mode |
| | Off | No 4G/LTE module or 4G/LTE module has failed |

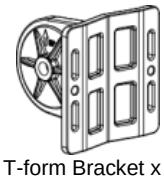
# Mounting Kit Installation

**Mounting Kit includes:**

1. Articulation Pole x 1
2. T-formed Bracket x 1
3. M8x40 Screw Bolt x 1
4. M8 Nut x 1
5. M8 Washer x 1
6. M6 Washer x 4
7. M8 Spring Washer x 1
8. M6 Spring Washer x 4
9. M6x16 Screw x 4



Articulation Pole x 1



T-form Bracket x 1

M8x40 Screw Bolt x 1

M8 Nut x 1

M8 Washer x 1
M6 Washer x 4

Spring Washer M8 x 1
Spring Washer M6 x 4

M6 x 16 Screw x 4

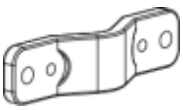
For **Wall Mount Installation**, you will need:

10. Wood Screw x 4
11. Wood / Gyprock x 4

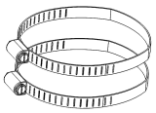
Wood Screw x 4
Wood / Gyprock Plug x 4

For **Pole Mount Installation**, you will need:

12. W-Bar x 1
13. Stainless Hose Clamp x 2
14. M6 x 60 Screw Bolt x 2
15. M6 Washer x 2
16. Spring Washer x 2



W-Bar x 1



Stainless Hose Clamp 1”~3” x 2

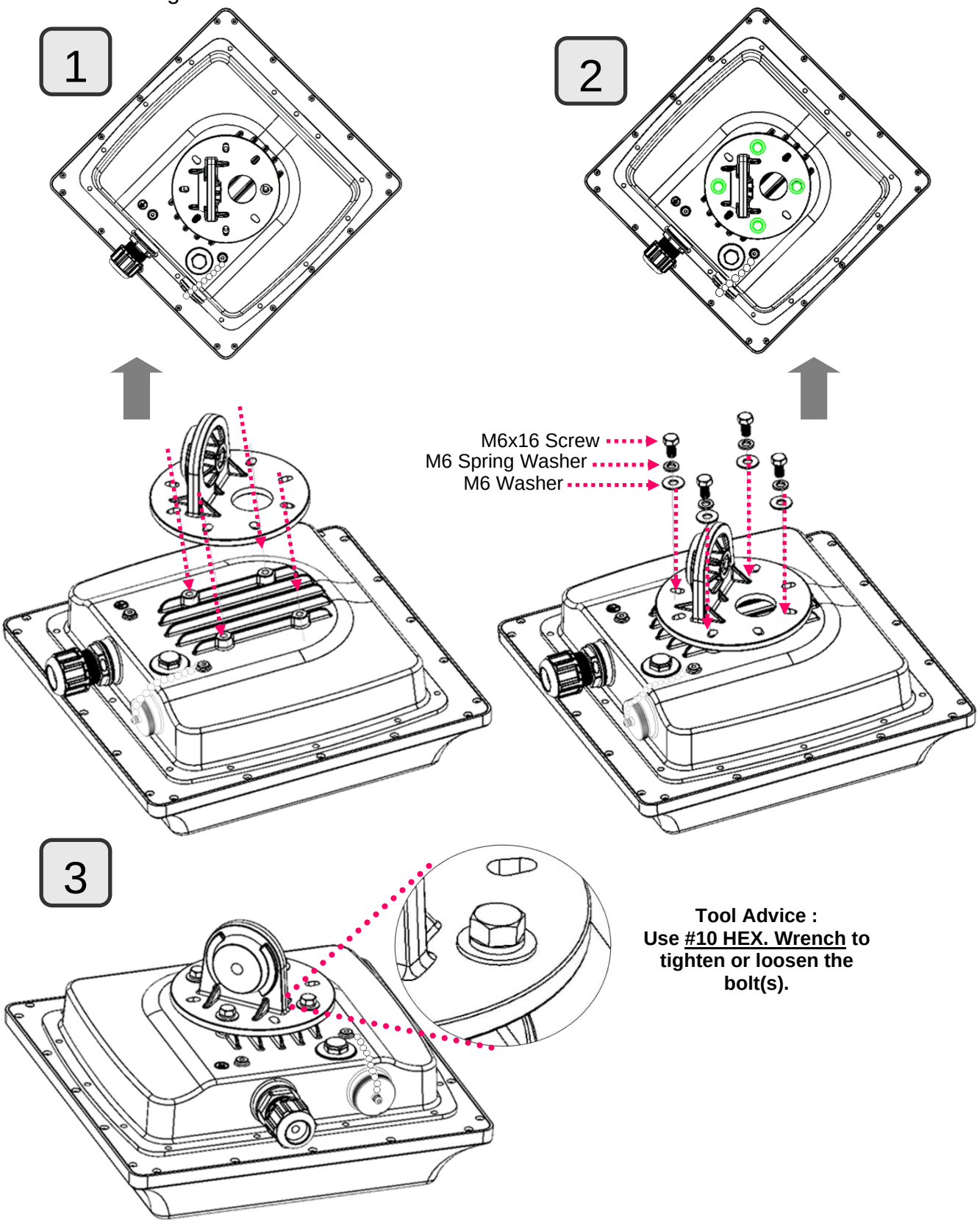
M6 x 60 Screw Bolt x 2

M6 Washer x 2

Spring Washer M6 x 2

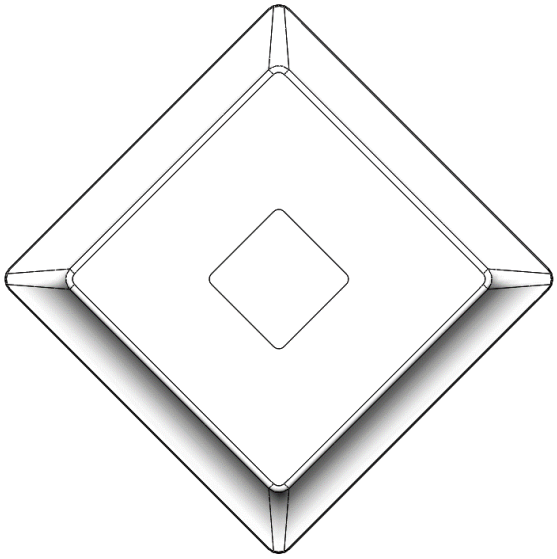
## 1. Attach the Articulation Pole to the Enclosure

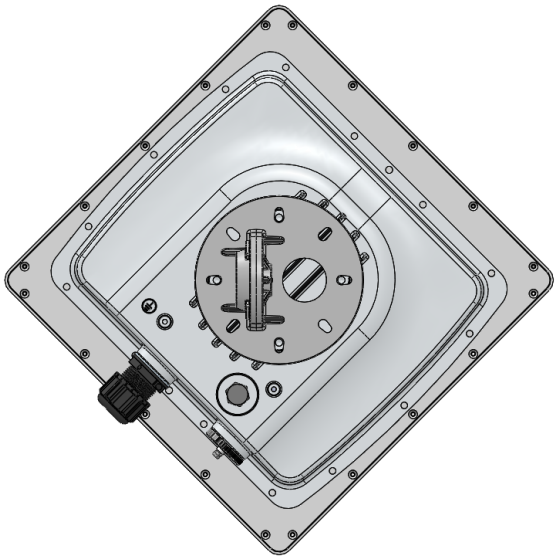
Attach the articulation pole to the back of the BEC 4G/LTE ODU enclosure using the supplied **M6 screws**, **M6 spring washers** and **M6x16 screws** which are included in the mounting kit.

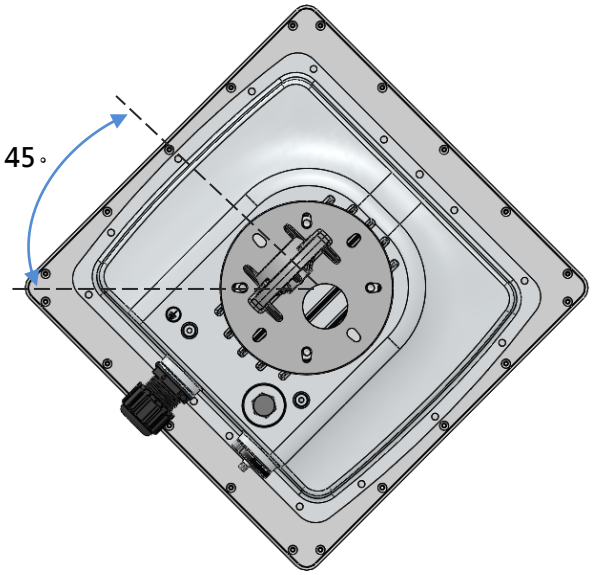


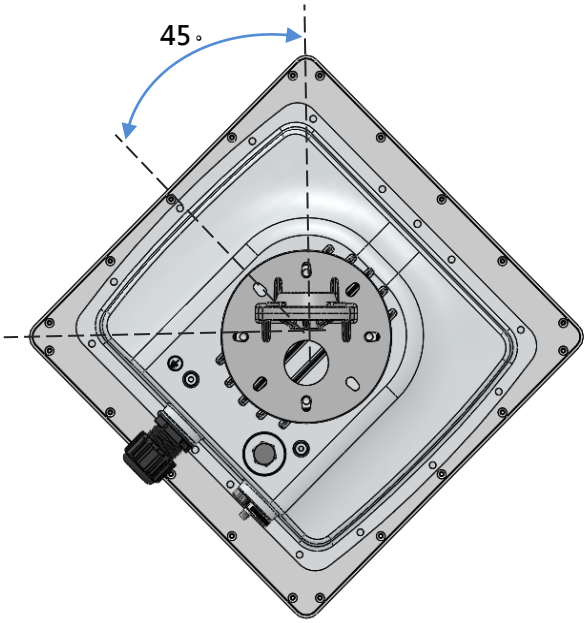

**Tool Advice :**
**Use #10 HEX. Wrench to tighten or loosen the bolt(s).**

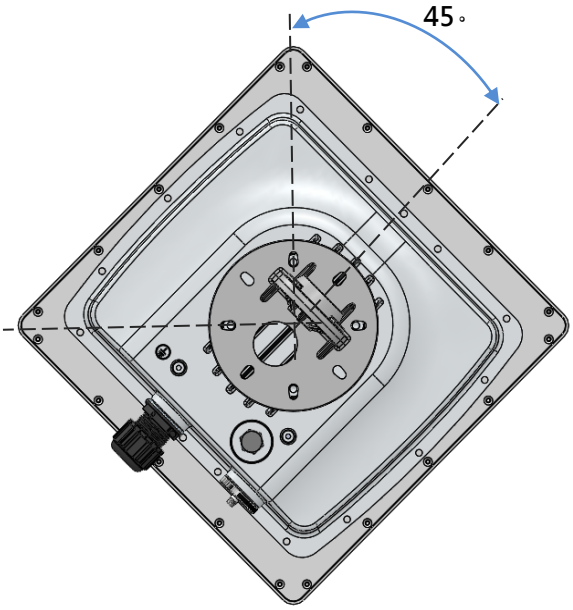
**Note: The flexible mounting kit can be adjusted in multiple angles to align with the base station for higher efficiency.**

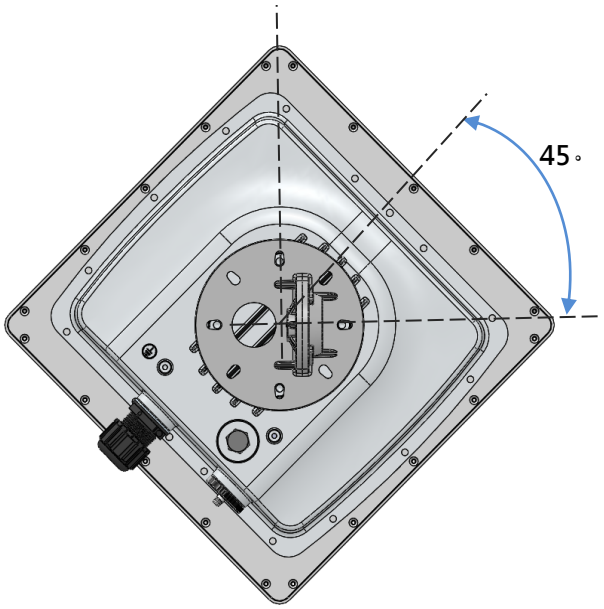






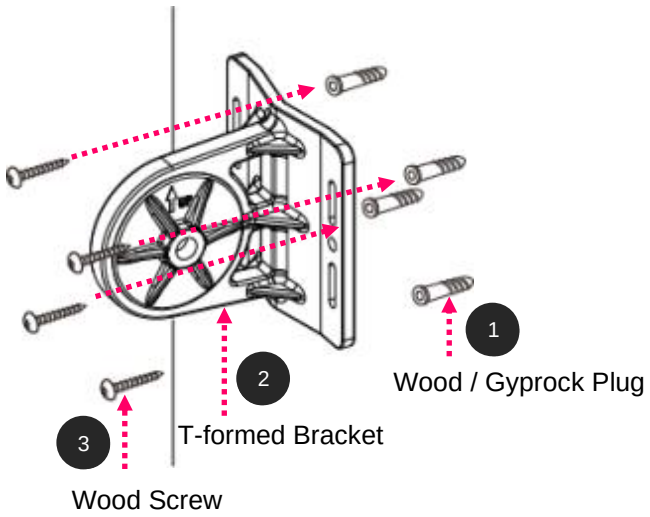



## 2. Wall or Pole Mount Installation

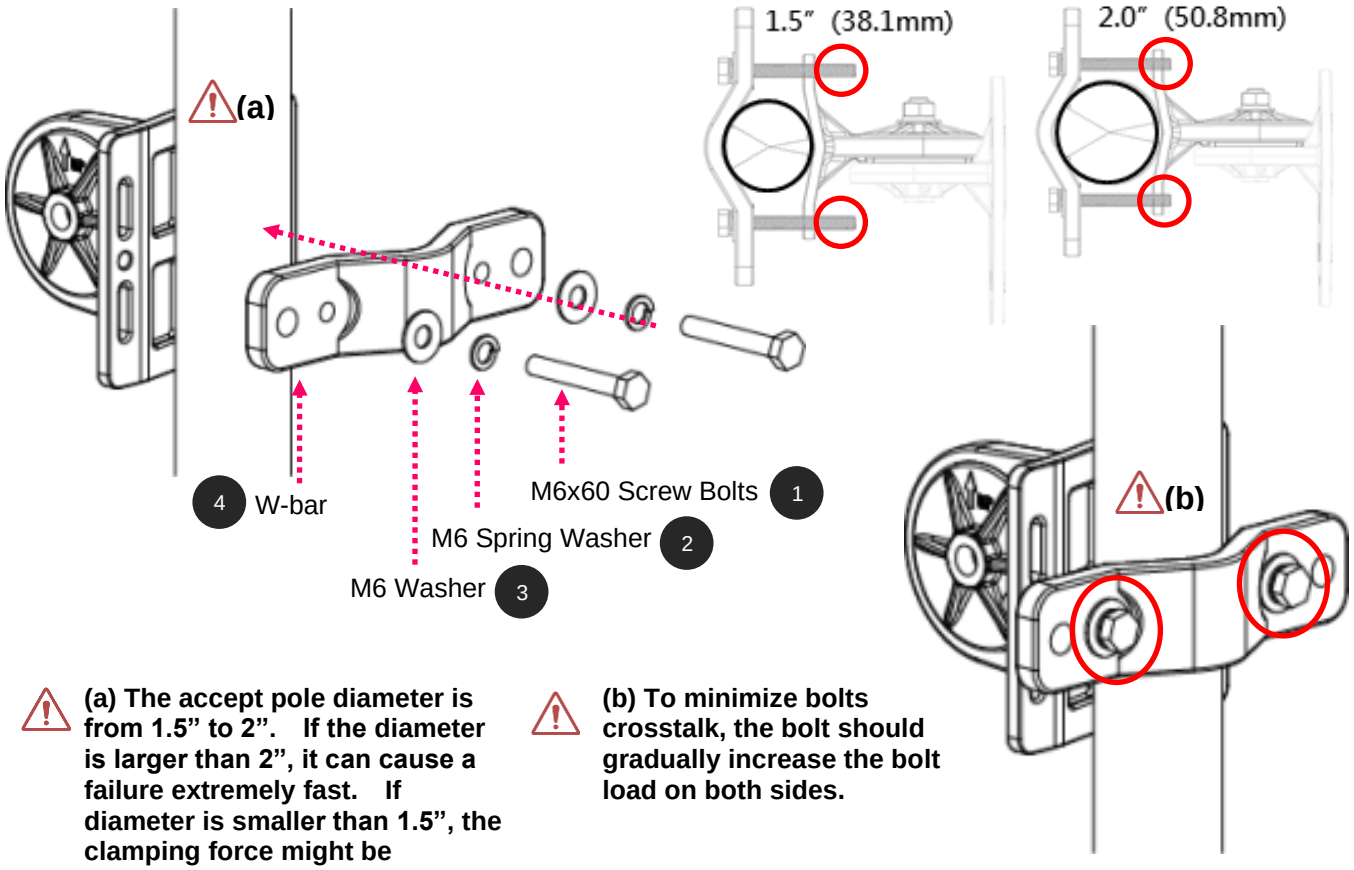
### Mounting on Wall

Fix the T-formed Bracket to the wall by using **wood screws** and **Gyprock plugs**.




### Mounting on a Pole between 1.5" to 2" (38.1~50.8mm)

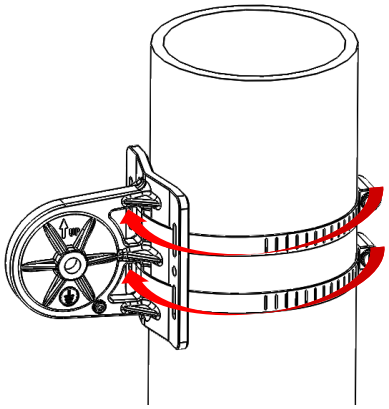
Attach the T-formed Bracket and the W-bar to the pole then use **M6x60 bolts**, **M6 spring washers** and **M6 washers** to fix the mounting kit onto the pole.



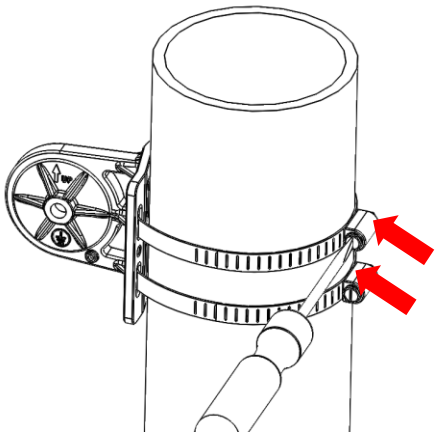

⚠ **(a) The accept pole diameter is from 1.5" to 2". If the diameter is larger than 2", it can cause a failure extremely fast. If diameter is smaller than 1.5", the clamping force might be insufficient in holding the device to the pole.**

⚠ **(b) To minimize bolts crosstalk, the bolt should gradually increase the bolt load on both sides.**

## Mounting on a Pole between 1” to 3” (25.4~76.2mm)



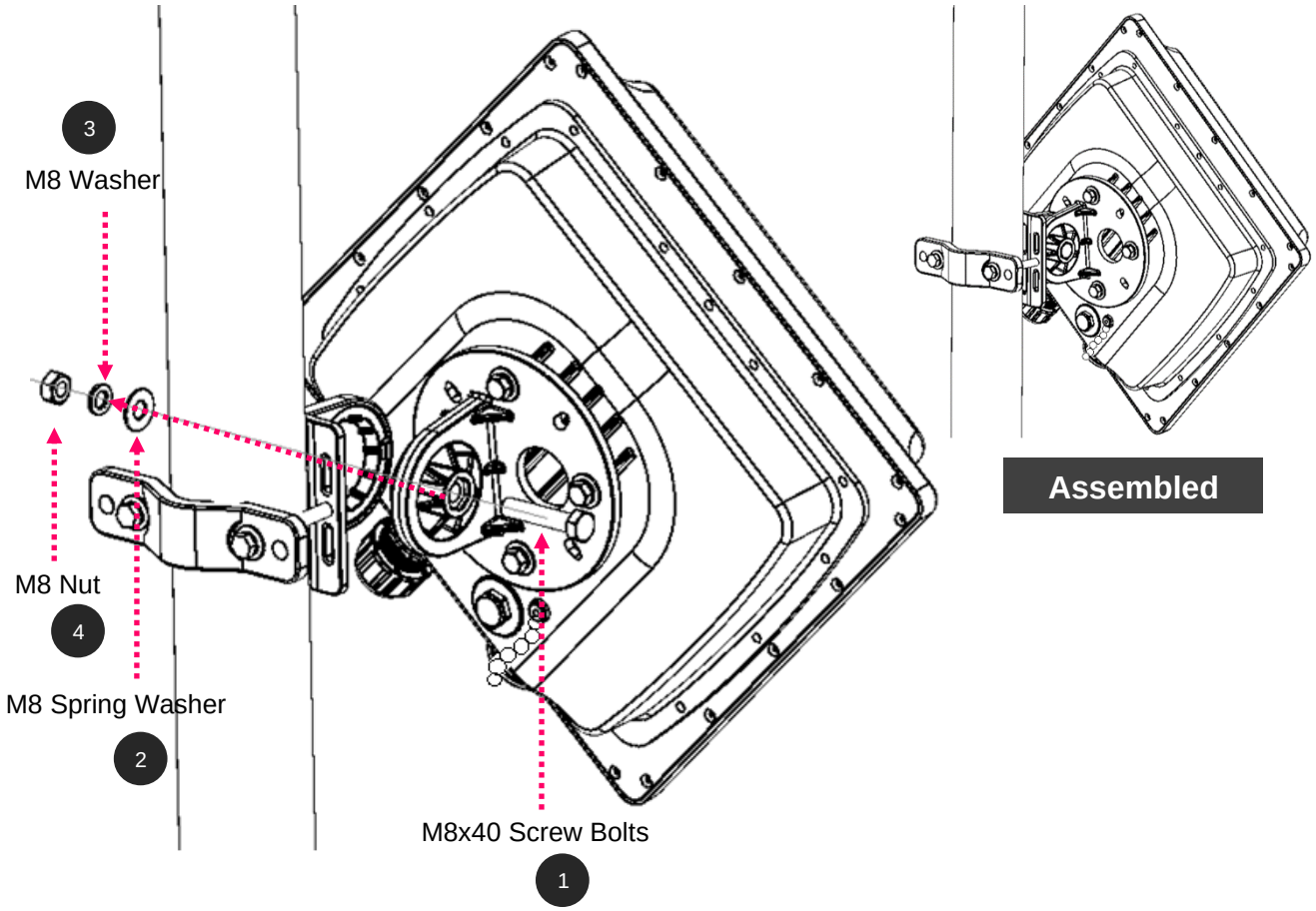
**Use the stainless hose clamps through the T-formed Bracket.**



**Fix the T-formed Bracket to the pole by using the supplied stainless hose clamps. Use a flat-head screwdriver to turn the head of the screw clockwise to tighten it.**

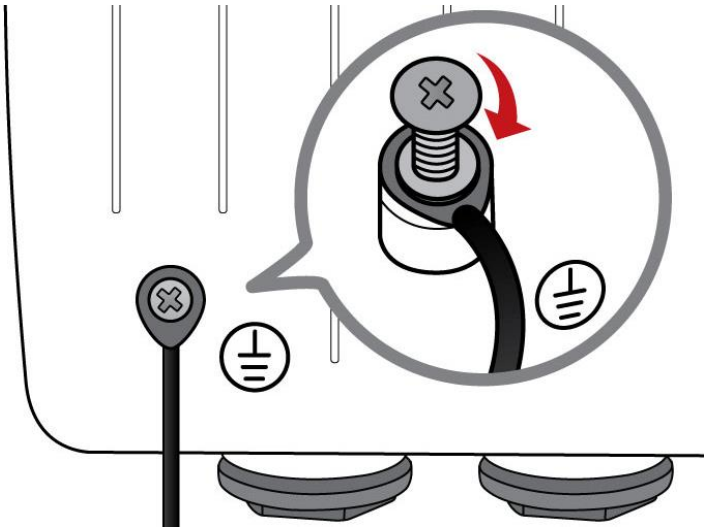
### 3. Attach the BEC 4G/LTE ODU Enclosure to the Pole

Attach the articulation pole (the BEC 4G/LTE ODU enclosure) to the T-formed bracket using the supplied **M8 nut**, **M8 spring washer**, **M8 washer** and **M8x40 screw bolts**.



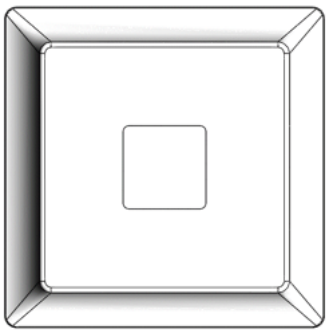
## 4. Proper Grounding to Complete the Installation

Attach the grounding wire to the BEC 4G/LTE ODU and tighten the screw

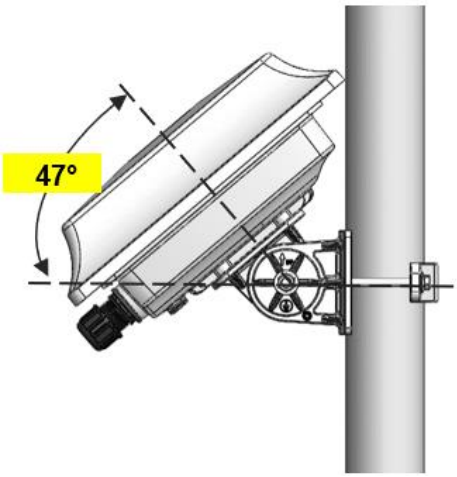


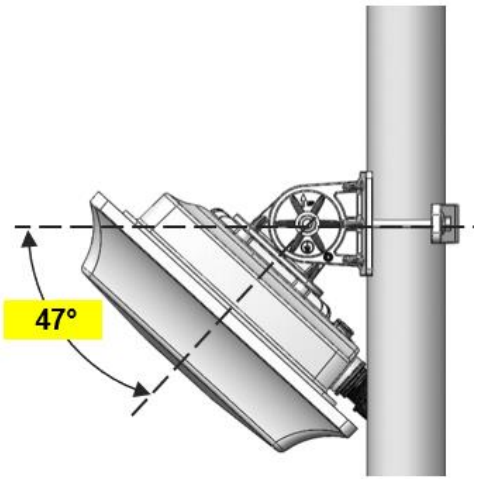
## 5. Position Adjustment

Adjust the BEC 4G/LTE ODU until it reaches the desire elevation and depression angle, then tight the **M8 nut** (see **Attach the BEC 4G/LTE ODU Enclosure to the Pole** for more information)

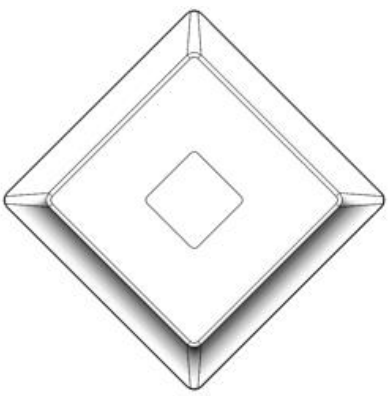


Max. upward angle: 47°
Max. downward angle: 47°

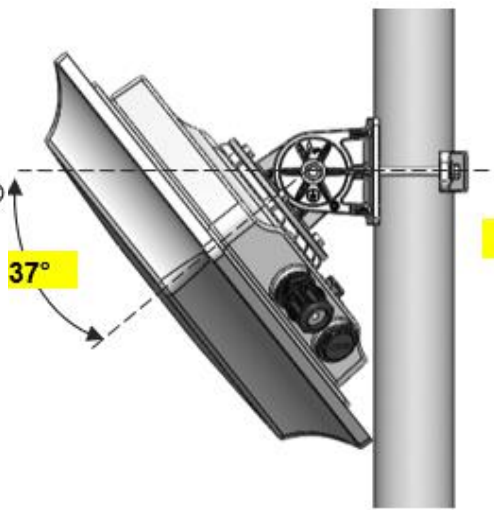


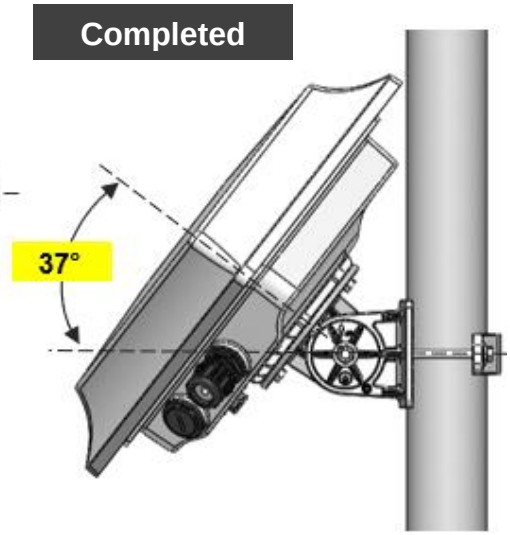




**Completed**



Max. upward angle: 37°
Max. downward angle: 37°

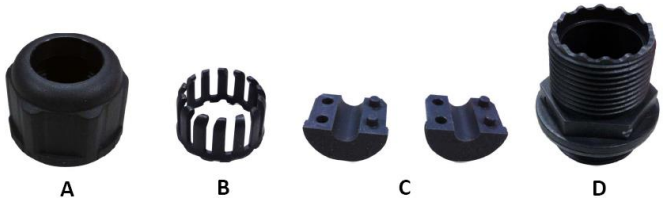


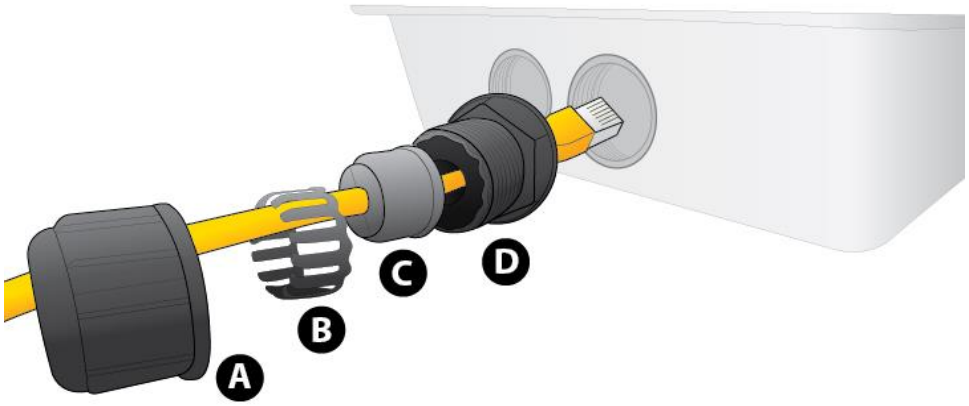
# Router Installation Instructions

## 1. Power on your BEC 4G/LTE ODU

Step 1: Assemble M25 cable gland




Step 2: Unscrew the LAN (PoE) cap then insert an outdoor Ethernet cable (RJ-45) through material A-D, and then connect the RJ-45 Ethernet cable into the LAN (PoE) port.



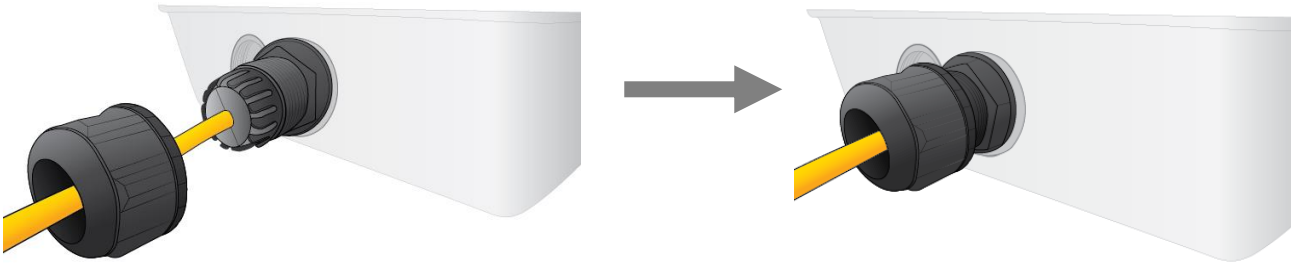

Step 3:

3.1: Insert Ⓒ at the back end of Ⓓ

3.2: clip Ⓑ on Ⓒ

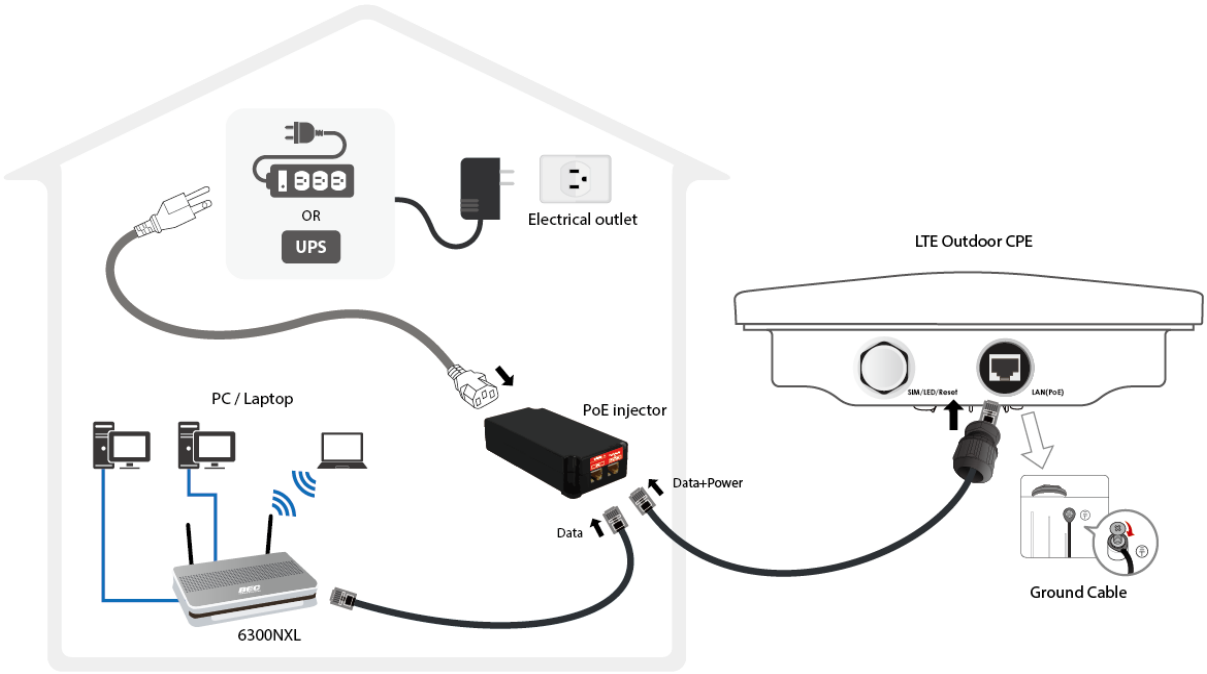
3.3: keep Ⓑ close to Ⓓ

3.4: then tighten Ⓐ.



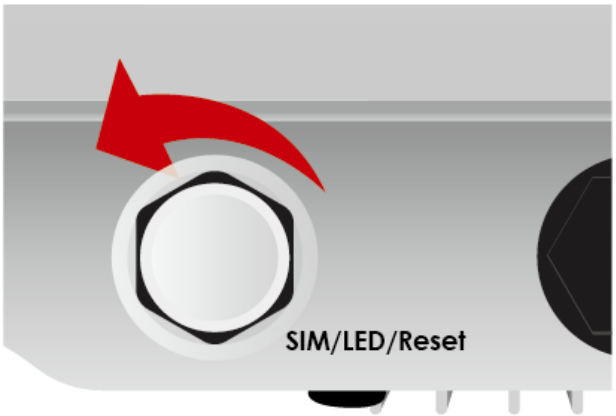
Step 4:
Insert the other end of outdoor Ethernet cable (RJ-45) to the supplied Gigabit PoE injector **Data+Power** port. Connect another Ethernet cable (RJ-45) directly to the **Data** port and the other end of cable to a switch or broadband router.

**IMPORTANT: It is recommended to put the Gigabit PoE Injector on an UPS or Surge Protector. Use a grounding wire to ground your BEC 4G/LTE ODU is REQUIRED!**



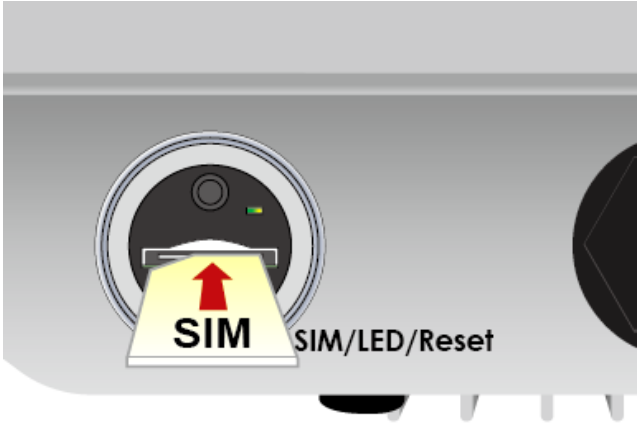

## 2. Set up your 4G/LTE Internet Connection

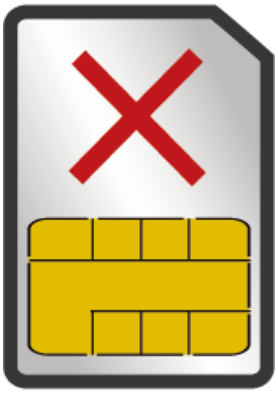
Step 1: Unscrew the cap of SIM card slot.



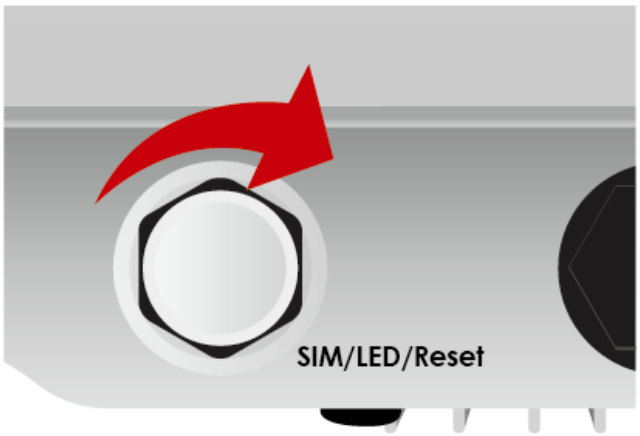

Step 2: Slide the SIM card with the mental contacts (gold plate) facing down to the SIM slot then push it all the way in until you hear the clicking sound.

**It is recommended to use an industrial-grade SIM card.**



Step 3: Screw the cap back tightly.




**Please power off the device before inserting or removing the SIM card.**

Step 4: Login to your BEC 4G/LTE ODU

The default IP of the router is **192.168.1.254** with subnet 255.255.255.0. Make sure the attached PC to this router is in the same subnet and has an IP address in the range between 192.168.1.1 ~ 192.168.1.253.
Open a web browser and type **http://192.168.1.254** in the URL address bar.

**URL Address bar:** type http://192.168.1.254

The login prompt will appear. Input the default username (**admin**) and password (**admin**) for Account type, Administrator. ***This username / password may vary by different Internet Service Providers.**

**Please see the relevant sections of user manual for detailed instructions on how to configure your BEC 4G/LTE ODU.**

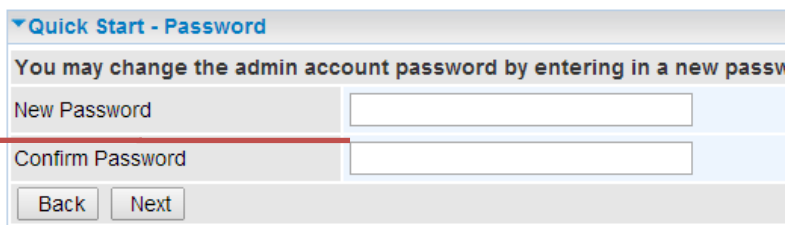
Step 5: Use the **Quick Start** wizard for fast Internet connection setups.

**5.1 Change administration password:** Setup a new password for "admin" account for device management. The default password is "admin". Click Continue to go on to the next step.
***The password may vary by different Internet Service Providers.**

**New Password:** assign a new, unique password

**Confirm Password:** re-enter the new password again

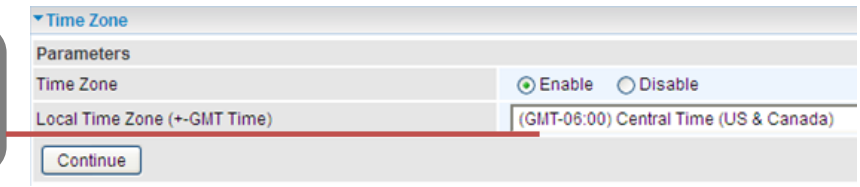
**Next Step:** click Next



**5.2 Time Zone Configuration:** Enable and select your Time Zone then click Continue to go on to the next step

**Time Zone:** select your time zone

**Next Step:** click Next




**5.3 4G/LTE Internet Connection Setup:** Fill out all relevant parameters provided by your ISP.

**5.4 Saving Configuration Settings:** The Setup Wizard has completed. Click **BACK** to make changes or correct mistakes. Click **NEXT** to save settings. If the Internet connection is not ready, please double check your 4G/LTE settings again.

# Troubleshooting

1. **None of the LEDs are on when you turn on the Router.**
   Check the connection between the adapter and the router. If the error persists, you may have a hardware problem. In this case you should contact technical support.

2. **You have forgotten your Router login and/or password.**
   Try the default login and password, please refer to User Manual or consult with your Internet Service Provider. If this fails, you can restore your router to its factory settings by holding the Reset button on the back of your router for 6 seconds or more. ***This username / password may vary by different Internet Service Providers.**

3. **Can't ping any PCs on the LAN.**
   Check the LAN (PoE) LED on the Router. The LED should be on for the port that has a PC connected. If it is off, check the cables between your Router and the PC. Make sure you have uninstalled any software firewall for troubleshooting. Verify that the IP address and the subnet mask are consistent between the router and the workstations.

# Product Support and Contact Information

Most problems can be solved by referring to the **Troubleshooting** section in the User Manual. If you have other inquiries or need further technical support, please contact with your Internet Service Provider or visit us at www.bectechnologies.net.

# FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**FCC Caution:**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference

(2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.